

**CLAIMS**

Claim 1-17: (cancelled)

Claim 18 (new) A method for producing models in layers, comprising:

- (a) applying a first material in a layer on a building platform;
- (b) selectively applying a second material to the first layer;
- (c) curing the first and second materials to form a solid; and
- (d) repeating steps (a) and (b) to achieve a plurality of layers to form a model, wherein the first material is a mixture of at least two components that is at least partially prepared prior to each applying step.

Claim 19 (new) The method of claim 18, wherein the first material is prepared continually.

Claim 20 (new) The method of claim 18, wherein the first material is prepared in batches.

Claim 21 (new) The method of claim 18, wherein the first material comprises a particulate material and a first reactive component.

Claim 22 (new) The method of claim 18, wherein the second material comprises a second reactive component.

Claim 23 (new) The method of claim 22, wherein the second reactive component is an activator.

Claim 24 (new) The method of claim 18, wherein steps (a) and (b) are repeated before the curing step is complete.

Claim 25 (new) The method of claim 18, wherein the first material remains porous during preparation.

Claim 26 (new) The method of claim 18, wherein the selectively applying step comprises applying the second material using a droplet producing technique.

Claim 27 (new) The method of claim 18, wherein the selectively applying step comprises applying the second material using a dispensing technique.

Claim 28 (new) The method of claim 18, wherein the second material comprises a carrying agent.

Claim 29 (new) The method of claim 18, wherein the curing step comprises forming a chemical bond between the first and second materials.

Claim 30 (new) The method of claim 18, wherein the curing step comprises forming a physical bond between the first and second materials.

Claim 31 (new) The method of claim 21, wherein the particulate material comprises a moulding sand chosen from the group including quartz sands, zircon sands, olivine sands, chamotte sands, and combinations thereof.

Claim 32 (new) The method of claim 21, wherein the particulate material comprises a polystyrene powder, a polyamide powder, another polymeric powder, and combinations thereof.

Claim 33 (new) The method of claim 21, wherein the first reactive component comprises furan resin, polyurethane resin, and combinations thereof.

Claim 34 (new) The method of claim 21, wherein the model comprises a mould for a non-ferrous casting.

Claim 35 (new) The method of claim 21, wherein the model comprises an investment pattern for a non-ferrous casting.